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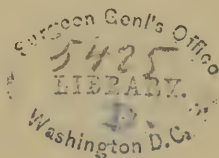
TOPOGRAPHY, WEATHER, AND DISEASES

OF THE

BAHAMA ISLANDS.

By P. S. TOWNSEND, M. D.

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History of New-York, &c. &c.



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TO

ALIRE RAFFENEAU DELILE, M. D.

Professor of Botany in the University of Montpellier, France ; Knight of the Royal Order of the Legion of Honour ; Member of the Institute of Egypt, &c. &c.

DEAR SIR,

THE observations contained in this essay, are gathered from memorandums made during a year's residence and practice in the West India Islands. Since my return to the United States, I have been induced to publish them with a view of instituting a comparison between the diseases of tropical and northern latitudes, and of directing more particularly the inquiries of physicians to the interesting subject of the influence of climate upon the human constitution ; for therein will, in my opinion, be hereafter found the clue which is to unravel many of the enigmas, and dispel much of the mystery and paradox which at present obscure and disfigure the philosophy of medicine. The changes which nature makes to accommodate the organization, and temper the constitution to the influence of climactic circumstances, and the different part which the same functions play under different parallels of latitude, serve to develope and illustrate the principles of pathology in the same way that comparative anatomy does the structure of the human body. In other words, climatization may be said to bring to light the laws which govern the living machine in the same manner that chemical analysis detects the properties of inanimate matter. It is thus that we are enabled to measure with greater exactitude the power and

capabilities of different organs, and to trace out and designate the chain of sympathies and affinities by which they are held together. These observations apply with peculiar force to the lymphatic, nervous, and sanguiferous systems, and to the pulmonary, gastric, hepatic, and cutaneous functions. If the application of these views to the subject matter of the following pages be deemed not unworthy of your attention, the liberty which I have taken in inscribing them to you, will be still more enhanced in the reflection, that though it be but a feeble and inadequate homage to your talents, it may recall to mind the many agreeable hours I passed at your hospitable mansion at Montpellier, and be received as an assurance of the esteem and respect with which your name is still cherished in my remembrance.

P. S. TOWNSEND.

New York, June 1, 1826.

MEMOIR, &c.

TOPOGRAPHY.

NASSAU is in latitude $25^{\circ} 25'$ north, and situated upon the north side of New Providence, one of the Bahama Islands. The town and island contain about five thousand inhabitants, one-third of which are coloured people, and one-sixth of the coloured people, mulattoes. The island, like the rest of the Bahamas, is composed entirely of coral rock, black, ragged, apparently worm-eaten, and water-worn like amygdaloid externally;* either of pale ash, or whitish yellow within, and of so soft a texture as to be easily wrought into blocks for building, into drip-stones, troughs, and other domestic utensils. This rock, the only mineral substance found in these islands, and which when growing on the bottom of the sea, spreads out into those arborescent expansions, that originally formed the tenements of generations of animals now extinct, has

* From its rough surface, it is called honey-comb rock, but it has much more the appearance of amygdaloid, though not worn like that into cells. It may perhaps be said to resemble fret-work in sculpture more than any other thing.

been by time consolidated into a homogeneous substance, with an obviously laminated structure, as may be seen on different parts of the shore. The island of New-Providence being but nineteen miles long by seven broad, has no rivers, and only here and there a small run, which scarcely deserve the name of creeks; some of these serve as outlets to the stagnant swamps, and decomposed vegetable matter from bushes, weeds, and other plants at their source. There are besides several healthy ponds of brackish transparent water, of which one or two are some miles in extent, and several fathoms in depth, with hard rocky bottoms, covered with sand and shells, and with subterraneous communications to the sea, the tide in them ebbing and flowing about six inches. Clusters of mangrove trees are seen in every direction growing out from the surface of these lagoons, and appear like little green islands. In the crevices between the rocks, and in small patches on their surface, there is a thin dry reddish loam, which, scanty as it is in quantity, gives sustenance and support to a luxuriant crop of bushes, such as the bay cedar, prickly pear, cocoa plumb, samphire, cock spur, bay lavender, &c. growing chiefly near the sea; the alder, the hercules club, wild thyme, &c. in the interior; and to the roots of numerous lofty fruit and ornamental trees, which to judge by their dimensions and abundant and ample foliage, must have obtained their nourishment from the warm and sunny atmosphere in which they breathe, rather than

from the foundation upon which they stand. Such are the cocoa-nut tree, the zapodilla, cotton tree, pride of India, avocado pear or vegetable marrow, the mango, sugar apple, custard apple, orange, lemon, lime, the shaddock, grape fruit, and forbidden fruit, guava, tamarind, bread fruit, sour sop, mammie, and papau, plumb, sand-box, coffee, palmetto, pine, sea grape, Jamaica apple, mastic, pigeon plumb, fig, and wild fig, poison wood, lignumvitæ, brazilleto, satin wood, yellow wood, cedar, horse-flesh and Madeira mahogany trees, &c. &c.

The town is located on the shore of a long narrow bay, formed by a narrow rocky reef between it and the sea, called Hog island, covered with bushes like the island of New-Providence, and running before and longitudinally with the main street of the town, east and west. About half a quarter of a mile in the rear of the town, the land rises abruptly to fifty or seventy feet elevation, where is built the government or governor's house, the barracks, and the two forts, Charlotte on the west, and Fincastle on the east. In the rear of this hill the island forms a long shallow basin, covered by a dreary waste of bushes, which grow to the height of from six to twenty feet in the crevices and hollows of the rock, with no object to diversify the scene, but the glistening surface of some solitary pond, or the tall tufted trunk of the majestic cocoa-nut, to denote the existence of small garden spots, which by dint of hard industry, have been reclaimed from the sterile rock. Beyond

this again, and about two and a half miles from town, is a high ridge running easterly and westerly, and called the Blue Hills, of about the same, or perhaps somewhat greater altitude than the ridge first described. From these again the land, or rather rock, descends to the sea on the south side of the island, the general course of the island being east and west.

As there are no rivers, and therefore no alluvion, and as but very little of the debris of vegetation is washed into the sea, the shores are bathed in water so perfectly pure and transparent, that the bottom may be clearly seen at the depth of a *hundred feet*. This has a peculiarly beautiful appearance to one accustomed to the muddy water of alluvial countries; and becomes still more interesting when it is recollected, that without this providential circumstance, and the brilliant sky of the climate by night as well as by day, the navigation of these islands would be infinitely more dangerous and disastrous than it is at present.

There is nothing that can properly be called a marsh, but there are several swamps and wet places, especially around the margin of the ponds, and near the sea-shore, where the luxuriant crop of vegetation during spring and summer, and the decomposition which ensues in the autumnal months, produce, as in all other countries, miasmatic fevers. On the north side of the island, and on many of the chain of reefs which run along easterly from New-Providence, I have observed the coral rock has a tendency to shelve over into the sea.

The coast on the north side of the Bahamas is remarkably bold and precipitous. Half a mile opposite the west end of the town is the western extremity of Hog Island, upon which stands the light-house at the entrance of the harbour. Leaving the white bottom of the harbour, and, as it is termed, *white* or transparent water, we pass in a few yards, out of soundings, and come into the deep blue water of the sea, as unfathomable as in the middle of the ocean. The line which forms the brow of this stupendous submarine precipice, is distinctly visible by the colour which the water assumes when viewed from the town. In the bay it is of a beautiful pea green, here and there streaked with brown or yellow, but on reaching the declivity, it suddenly changes to a deep or dark blue, which, contrasted with the former, gives a most picturesque and singular appearance to the harbour of Nassau. In richness of tint, the green waters of the Bahamas far exceed in beauty those of the Mediterranean.

On the contrary, the south side of this groupe of islands slopes so gently, that you may almost wade into the sea for miles, and no vessel except the smallest kind of craft can come within a long distance of the shore. In short, the Bahama Islands may be considered one immense formation of coral rock of several hundred miles in extent and breadth, running generally in a north-easterly and south-westerly course, by far the greater part of which is sunk several fathoms below the surface of the sea, and known under the denomination of

the Great Bahama Bank, &c.; while part has emerged from the water to the altitude of from fifty to one hundred feet, and is composed of long barren ridges or reefs of rocks covered with bushes, with here and there a cocoa-nut tree, which is the general aspect of the headland of this cluster, when seen at sea.* The process by which these and other similar islands are made, may be compared to what takes place in the vegetable world in the formation of bog, or marsh. Crops of coral and other sea plants follow each other in succession, and are in turn decomposed, or rather disintegrated, and consolidated into laminated rock, the bulk, of which, aided by the remains of shells, ultimately increases to such dimensions, as to swell above the surface of the water. At Lyford's Key, upon the south-west point of the island, there was a channel, not sixty years ago, that would admit vessels drawing six feet water, but which is now a cornfield, with a house upon it. In the South Sea Islands, according to Captain Flinders, the changes which, from the incessant activity of these animals, are wrought in the configuration of submarine masses of coral, render it necessary to have new charts every few years.

* Sterile and rocky as these islands are, their growth of bushes make them appear a few miles at sea as if clothed with a rich verdure. On nearing the shore, however, interstices and bare patches of rock begin to be discovered between the bushes, and on landing, one is astonished that as much vegetation as is actually found upon them can obtain sustenance from the few scattered handfuls of soil sprinkled in the crevices and indentations over the rough surface of the rock.

I have observed this coral substance here in three different states :

1st. As it is found growing upon the banks under water inhabited by living animals.

2d. Where the habitation has been deserted by its tenant and is going to decay, retaining more or less of its original characters, though in an imperfect state, such as the colours, form, &c. In this condition I have seen the madreporites, brain stones, &c.: also many species of shells (retaining their colours, though imbedded in the coral as petrifications,) in great quantities in the stone fences on different parts of the island.

3d. The consolidated laminated coral rock of soft texture already described, and which is the oldest formation.

From all that has been stated, it is obvious that there is nothing in the soil, or rather the basis which composes this cluster, that can be deleterious to health. The vegetation also being in the aggregate less abundant, and less luxuriant in proportion to this sterility, cannot operate so extensively in the production of disease, as in those islands covered with a deep stratum of rich loam. The bibulous nature of the calcareous rock also to which it clings, serves to absorb and to neutralize perhaps many of the noxious juices and exhalations that result from the decomposition of vegetable matters. The slime and mud, however, which collect in the ponds in the rear of the hill back of the town, is said at certain seasons to impregnate the air with unwholesome miasms. It is

even asserted that the south-easterly winds, which are most prevalent during summer and autumn, become saturated with these exhalations, and passing in their course over the western part of the town and the barracks, render those places unhealthy, while the central and eastern part of the town, from being out of the range, though but a mile distant, remain comparatively exempt from sickness.

WEATHER.

THE meteorological observations embraced in this table, comprise a space of six months, commencing with March 1824.

		March.	April.	May.	June.	July.	August
Average daily highest elevation of the thermometer.F. }		78.29	80.43	83.22	85.20	89.00	88.06
The winds prevail- ed. }	E. as	23	7	2	2	10	12
	W.	none	none	none	none	none	none
	N.	none	2	1	2	5	1
	S.	2	2	6	7	1	7
	N. E.	24	12	20	12	8	5
	S. E.	31	24	24	16	34	35
	N.W.	8	8	5	7	1	none
		S. W.	2	3	2	8	none
Days of rain		7	8	13	13	11	20
Do. of thunder and lightning,		none	1	2	2	6	13

The range of the thermometer in any month scarcely ever exceeded from *five* to *eight* degrees during the twenty-four hours, the greatest depression being always between midnight and day-break. A thunder-storm and heavy rain in the day or night, always cooled the air, and lowered the mercury from 2 to 10 degrees. On the 17th June, the thermometer for the first time this year reached as high as 90° at 2 P.M., but that was the only day the whole month it rose so high. On the 2d July, the mercury ascended to 91° at 2 P.M., to 90° on the 13th at 3 P.M., and to 91° on the 19th, 20th, and 21st, at 2 P.M.: there was not a day in July in which it did not go beyond 86° , the whole of this month being exceedingly hot and dry; hotter than had been known before in forty years, which caused many to apprehend the occurrence of a hurricane. The quicksilver in this month did not sink at any time of the night below 82° , which rendered that period of the twenty-four hours extremely oppressive, especially when it was calm, as frequently happened. I have often felt the heat in the day less oppressive at 90° , if there was a breeze, than when the air was calm, and the temperature as low as 86° and 84° . The weather was as pleasant to the feelings as could be desired, until the beginning of June, when light dresses became absolutely requisite for comfort. What was unusual, the rays of the sun were seldom obscured during all July, and the thunder-showers, whose refreshing influence is eagerly sought for, and naturally expected in this

month, scarcely exceeded in number those of June. August again assumed its wonted livery, and after the 4th of the month, a day rarely passed without the occurrence of thunder and lightning, and a heavy shower of rain in the afternoon, which kept the mercury almost constantly below 90°, and rendered the air infinitely more agreeable to my feelings, than the sultry weather which I had been accustomed to experience in New-York during this month.

Up to this time I do not recollect a day, certainly not two days during winter, spring, and summer, on which the sun was constantly obscured, or the heavens entirely overcast. The climate of the Bahamas, like the limpid, colourless waters that bathe its shores, may with justice be denominated brilliant and transparent. Fogs and mists are utterly unknown, nor is the heat so violent or intolerable as those in the north are led to believe. During all the winter months, nothing could surpass the agreeable, uniform temperature of the air, which was constantly fanned and purified by gentle breezes from the north-west. A case of sickness in an island containing a population of 5000 souls, was at this period quite a rare occurrence.* The dews which at times are heavy, and which may easily be avoided, are the only phenomena at this season which can be considered obnoxious to health. For consumptive patients, I should not

* Certainly none that I heard of was attributed to atmospheric influence.

hesitate to recommend a winter residence at Nassau, as incomparably preferable to the chilly atmosphere of Montpellier and Nice. The thermometer in winter seldom exceeded 85° , and was only on one day as low as 60° , when several of the natives complained of intense cold; and what seemed ludicrous and unaccountable, suffered from *chapped lips*!

From winter to the beginning of June, the mercury rises by regular and successive gradations, until it has reached its maximum range, which may be said to be between 80 and 90° of Fahrenheit, and generally about the middle of July. Between these circumscribed limits, it fluctuates until autumn, when it begins to fall again till the commencement of winter.

The uniform law observed in the increments and decrements of heat, prepare and accommodate the system to the temperature of the different months and seasons, and render the changes which take place much more easy to be endured, than those irregular and extraordinary vicissitudes of heat and cold which characterize the climate of the United States.

It must be at the same time admitted, as has been remarked by Humboldt, that the high and steady range of the thermometer during most of the year, greatly augments the sensibility of the body, and in this way gives origin perhaps to that numerous and distressing class of diseases which are seated in the nervous tissue, and so prevalent in tropical countries.

The equableness of temperature in this climate may be judged of from the following Table.

VARIATION OF THE THERMOMETER,

In March, at 9 A. M.	was from 65° to 81°
April, at 8 A. M.	70 to 79
May, at 8 A. M.	75 to 81
May, at 10 P. M.	73 to 82
June, at 7 A. M.	74 to 82
June, at 10 P. M.	74 to 85
July, at 7 A. M.	81 to 84
July, at 10 P. M.	81 to 86
August, at 7 A. M.	79 to 83
August, at 10 P. M.	79 to 84

The trade winds prevailed almost during the whole period of time to which these observations refer, as will be seen by the table of the weather : the winds from the N. E. S. E. and E. being as four to one in proportion to those from the other quarters of the compass. There being no elevated and extensive tracts of land in this part of the West Indies, to modify the direction of the winds, there are none that can be said to be peculiar or local to the Bahama Islands. They are the same as those that prevail at sea ; and often, therefore, change very suddenly ; making the whole circuit of the compass sometimes in a couple of hours ; as for example, after continuing steadily for days and nights at S. E. the vane points in a moment to the S. ; then in a few moments to the W. ; then to the

N. W. bringing up a thunder shower, which, having gone over, the wind comes out to the N. and then gets round again to the point from whence it departed.

The warm S. E. wind, though so prevalent, is almost as much dreaded at Nassau, as the cold Maestral, or N. W. at Marseilles. It is thought very damp, oppressive, and unwholesome, especially in winter, when the warm vapours of the Carribean archipelago, with which it comes overcharged, are condensed into heavy dew. I have often, however, seen the sky as clear, and felt the air as pure, apparently, when the wind was S. E., as from any other part of the compass, excepting the N. and N. W., which are cool, bracing breezes, coming with much more force than any of the other winds, and always hailed as a great treat and luxury, particularly in the warm weather.

The N. and N. W. are more prevalent in winter than in summer; but being obliged in their course from the American continent to pass over an extensive space of ocean before they reach these islands, are more often humid than the same wind on the coast of the United States. Hence they are frequently the forerunners of showers and thunder-gusts.

I am informed by General Grant, who is Governor of these islands, and has been for many years residing in the West Indies, that the climate of the Bahamas is much more analogous to that of Bermuda, than to the great mass of islands, which, properly speaking, compose the West Indies.

The Bahamas, being the first chain of islands south of the United States, feel more directly the influence of the winds coming from the American continent, than do any of the other West Indies. Hence the climate participates in some degree with that of North America; for the atmosphere during the autumnal and winter months, is so frequently purified and cooled by northerly winds from the continent, that the aggregate amount of heat for the year is perhaps less than would be supposed from the parallels of latitude upon which the Bahamas are situated. Yet Cuba, only two days sail from Nassau, and only one or two degrees more south, is, from its regular land and sea-breezes, which Nassau is not favoured with, said to be a much pleasanter summer residence than this island. I have one thing further to observe on the meteorology of the Bahamas, that the moonlight is remarkably brilliant, so much so, as often to be sufficiently clear to read by, though the inhabitants I find are under an impression that the moonlight of the north, on a cold frosty evening, is much brighter. The brilliancy of the moon here is perhaps owing to the same cause which makes the sun in the tropics hotter and brighter than further north, viz. the greater perpendicularity of its rays.

DISEASES.

	Mar	April	May	June	July.	Aug.
Abortio - - - - -				1		
Amenorrhœa - - - - -						1
Anthrax - - - - -			1		1	
Apoplexia - - - - -				1		
Asthma - - - - -			1		1	
Cephalalgia - - - - -				2	2	
Chorea Sancti Viti - - - - -					1	
Convulsio - - - - -	1			2	1	1
Constipatio - - - - -					1	
Coup de Soleil - - - - -				1		
Dysenteria - - - - -	1	1	1	8	8	3
Diarrhœa - - - - -					2	
Dysmenorrhœa - - - - -	1	1		2		1
Dyspepsia - - - - -		1			1	
Erythema Mercurialis - - - - -				3	1	
Febris Intermittens Quotidiana - - - - -					3	
Febris Intermittens Quartana - - - - -					1	
Febris Remittens - - - - -					1	
Febris Remittens Biliosa - - - - -			1	2	3	
Febris Remittens Infantilis - - - - -			1		2	1
Fistula in perineo - - - - -						2
Furunculus - - - - -					prevalent	
Hæmorrhoids - - - - -					2	1
Hydrops Universalis - - - - -	1					
Hydrothorax - - - - -				1		
Hysteria - - - - -				6		
Leucorrhœa - - - - -				2	2	1
Mania - - - - -					1	
Menorrhagia - - - - -				1		
Peripneumonia - - - - -	1	1				
Pterygium - - - - -				1	1	1
Rheumatismus Universalis - - - - -					1	
Rheumatismus Thoracicus - - - - -					2	3
Rheumatismus Lumbaris - - - - -					1	
Synocha - - - - -				1	2	
Syphilis - - - - -					3	
Tonsilitis - - - - -	1				1	
Tremor a potu - - - - -		1				
Typhus - - - - -						1
Urethritis - - - - -			1	1	2	3
Vermes - - - - -			1		1	
Vomitus a potu - - - - -					2	

Anthrax. The case of Anthrax which occurred in May, was one of the most formidable instances of the disease I have ever seen. The particulars of this case have already been published in the New-York Medical and Physical Journal, No. XI.

Apoplexy. The case of Apoplexy occurred in a very robust young woman, where the menses had been suppressed, and on whom an attempt was made to restore them by administering an emetic previous to venesection, and without medical advice.

Asthma. The most alarming of the two cases of Asthma, was in a widow, aged 40, in whom the paroxysms were so exceedingly violent, as to give the appearance of a person in the agonies of death. She had been more or less afflicted every year with this malady since the age of eleven months. The following combination recommended by Dr. Tynes, under whose care she had been for a long time, always operated like a charm, and though it could not annihilate the complaint, never failed to afford her, she informed me, almost instantaneous relief.

℞	Elix. Paregor.	oz. j.
	Tinc. Thebaic.	
	Vin. Antimon.	aa dr. j. M.

a tea-spoonful frequently, or more, according to circumstances.

The catamenia in this case were regular, and also the other functions. During the paroxysm she usually vomited and after it had subsided,

complained much of acute pain in the muscular parietes of the thorax.

Cephalalgia. All the cases of Cephalalgia arose from a redundancy of bile, and they were generally unaccompanied with fever; the pain was located over the eye-brows across the forehead, attended with soreness, but not redness of the eye-balls. The tongue was usually covered with a dirty yellow moist fur, and the mouth affected with a bitter taste. I consider this species of Cephalalgia to be one of the most idiopathic indications of a redundancy of, and obstruction in the biliary secretion, of any that I am acquainted with. The affection was relieved by venesection (if obstinate,) emetics; blisters across the shoulders and back of the neck, cathartics, &c.

Convulsio. The case which occurred in March, was in a mulatto child, aged about three years, who being the pet of the house servants, had been indulged in rather richer fare than he would have received if he had been comprised in one of the number of field negroes. The consequence was, that he had been stuffed with fat and greasy food of all kinds whenever he desired to eat, and had become remarkably gross. Before I could make an impression on the disease, I was obliged to open both temporal arteries; and a vein in the hand, plunge him several times in a hot bath, blister the neck and extremities, and after the effects of the laudanum given at the beginning had gone off, to administer two large cathartics in succession, each containing calomel and rhubarb, aa. grs. vi. be-

sides which, enemata, pink root tea, &c. After the fits had continued almost without intermission for twenty-four hours, the tone of the circulation, which had been augmented to a very high degree, became relaxed, the fever subsided, and the child recovered.

It was not the effect of worms, for only one was brought away, nor was it the invasion of any particular type of fever, as was proved by the rapid convalescence, and the symptoms associated with the convulsions; but it was the simple result of the high state of tension, and sthenic diathesis induced by previous engorgement of the blood-vessels from the use of animal food, as roast beef, rich gravy and turtle soups, &c. all of which were extremely improper for the inflammatory temperament and feeble digestion of a child of that age. One of the other cases of convulsion, proceeded from worms (*lumbria*) and dentition, and is remarkable from the circumstance of the child who was the subject of it, being afflicted with the *dirt-eating disease*, though only twenty months old, showing that this complaint, which Dr. Dancer compares to Chlorosis in women, cannot in this instance at least have been feigned. The mother told me, whenever it could steal away slyly, it was found lying in the path or road on its belly, licking up the dirt and dust.

Dysenteria. What are called the spring rains, set in the last week in May, and continued to the end of the first week in June. The mercury in the thermometer, which for nearly the whole of May,

had every morning by eight o'clock reached as high or higher than 80° , fell on the 25th of the month several degrees, and continued to range between 73° and 77° until the 6th of June. During this period the rain fell almost every day in torrents on some part of the day, but only for a few hours at a time; the sun coming out between the showers. This sudden change of weather from a hot dry atmosphere, to one chilled by a succession of heavy rains with alternations of sunshine, produced a number of dysenteries during June, which may be said to have been the first month since my residence at Nassau, in which there has been any thing like a prevalence of sickness, and that by no means to the extent to merit the name of epidemic. In children under two and three years, it usually proved fatal, and the older the patient was, the more probability also was there of recovery. I believe indeed there was not an instance of a person dying who had arrived at the age of puberty, the constitution having by that time gained sufficient vigour, to recover from the irritability and emaciation which this harassing distemper produces. Of the symptomatology of a disease so universally understood, I shall say but few words. There were very few cases in which it was attended with febrile irritation, except in children, the local affection at their tender age seeming to react more powerfully upon the constitution than in those that were older. The tormina or twisting pain around the navel, the tenesmus, the lotura carnia, (called here *cold*) nausea. scybala, &c.

were all precisely such as they have been so often described by those who have written upon this subject. In some cases, pure blood was discharged to the amount of several ounces at a time ; and, if it is considered that the passages amount sometimes to forty in twenty-four hours, one may readily conceive the dangerous nature of the disease when the evacuations assume that character, and how seldom venesection can be requisite under such circumstances. In one case of a woman, who had nearly attained her sixtieth year, and where bloody discharges came on towards the conclusion of the complaint, I congratulated myself in not having bled her, or used any violent depleting means in the beginning. With great exertions she recovered.

Many cases seem to have been caused by the irritation of an over-abundant quantity of bile in the primæ viæ ; for they were relieved when the constriction was taken off, and copious bilious evacuations obtained by powerful and repeated cathartics. Most of the cases of dysentery this month, no doubt were occasioned by the weather ; but some of them were in part attributable also to certain fruits, which began now to be brought in, before they were perfectly ripened, or in a state to eat. Such were the pine-apple, mammie, limes, papau, sour-sop, &c., most of which we are entirely unacquainted with in a cold climate.

I have heard some ascribe this disease to rain-water washed down from the hill in the rear of the town into the wells, the water being in general very pure, and uncontaminated with saline or

other matters, even within a few yards of the sea, owing to its being filtrated through the solid porous rock out of which the wells are excavated. I think this opinion improbable: in the first place, because I do not recollect to have observed the colour or taste of the water changed in any part of the town in which I drank it; and, in the second place, because several cases of dysentery occurred in the Poor's House, during my attendance there, and where the wells are situated on a knoll in the rear of the building, in such a manner that the water from the adjacent hill could not wash into them.

My treatment of the disease was extremely simple, but very active; and, I may add, without perhaps appropriating too much to myself, that it was eminently successful. If the excitement or constitution, and time of life, and other circumstances, admitted the employment of the lancet, that remedy, when indicated, was always had recourse to, provided I was called early in the disease. I have frequently annihilated the disease in a few hours, if called in time, by giving a powerful emetic, the whole at once, composed of

Tart. Ant. et Pot. grs. v.

Pulv. Ceph. Ipecac. grs. xv. M. fiat pulvis.

When there was much constriction in the intestinal tube, and much pain at stool, I never failed to begin with this invaluable combination. It has the happiest effect in relaxing the whole system, and particularly the spasm which exists in the muscular coats of the colon and rectum. After the nausea

and vomiting had subsided, the medicine invariably passed off by stool, (indeed in some instances more freely than it produced vomiting,) leaving the patient free of pain and tenesmus, and in some instances, of every other symptom of the disease. If, however, the irritation in the bowels continued, the following combination was given a few hours after :

R Sub. Mur. Hyd. grs. xv.

Pulv. Conv. Jalapi, dr. fs. M. ft. pulvis.

I was often under the necessity of repeating this cathartic for several days, and also the ipecacuanha alone in small doses, together with the application of a large blister over the abdomen, and emollient injections, and the pediluvium several times in the twenty-four hours. I confined the patient rigidly to bland drinks, as mutton soup, with a large quantity of ockro boiled in it, arrow-root, sago, tapiocha, barley-water, gruel, and lemon grass, basil or common tea; never permitting him to deviate out of this catalogue, and to take no other food whatever, of any description, besides, especially to avoid fruits. At the same time to be clothed in flannel, and to avoid damp air, and the night dews. After the disease had continued for a week or ten days, and the discharges became more healthy, but were attended with tenesmus, and occurred too often; and if, at the same time, the local and constitutional irritation had mostly subsided, leaving nothing behind but extreme emaciation and debility,—I did not hesitate to commence immediately with opium, giving from three to four

and six grains in the afternoon and night, in pills with or without ipecacuanha, continuing the patient upon the same diet and regimen, with the exception of adding daily a small quantity of brandy or wine to his arrow-root and gruel.

You will perhaps be surprised to see recommended such large doses of calomel and antimony. In this climate, what may be called the *centrifugal force of the circulation*, or the tendency of the fluids to the skin, preponderates so much over that to the interior parts of the organization, that those medicines intended as cathartics, will pass off in cutaneous perspiration, if not given in sufficiently large quantities. In relying upon small doses, the calomel gradually insinuates itself into the fluids, and the patient becomes salivated before we are aware of it, and as effectually as if it had been combined with opium; for it must be recollected also in reference to the principle I have assumed, that the salivary organs are located in the teguments upon the external part of the body. I have seen several persons in this town who have lost nearly all their teeth,* and been labouring for years

* In most of these cases, however, mercury had been given with an intention to salivate. In two children of this description, one of whom fell a victim to the mal-administration of this medicine, portions of the alveolar process, near an inch in length, and half an inch in breadth, with the teeth firmly set in them, were entirely denuded of the gum, and separated from the jaw-bone, so as to be removed without difficulty by the aid of the fingers! I have one of these pieces in my collection. There was no suspicion of venereal taint in either case, and nothing that could have justified this barbarous practice.

under the influence of mercurialization, in some cases perhaps unintentionally induced by the injudicious administration of this medicine.

Towards the termination of the disease, I found the sedative properties of opium occasionally combined or alternated with ipecacuanha, and a resolute adherence to bland liquid nourishments, sufficient to check the evacuations, and restore the tone of the bowels, without the aid of lead or vegetable astringents, which, from what I have seen, I should suppose to be medicines of very doubtful efficacy, if not dangerous to be administered at any stage of the disorder. In some few cases, I have seen an obstinate tenesmal diarrhœa prolonged for months after the primary affection had been entirely removed.

In such cases, the failure of almost every remedy prescribed, and the danger of the patient sinking under the exhaustion produced, tempts one to have recourse to whatever may have the reputation of astringent properties. The sea-grape tree, the pomegranate, bay-cedar bush, bark of the guava, and many other indigenous plants of these islands, are much used among domestic remedies. I am induced to believe they generally do more harm than good, and ought not to be administered but with the greatest caution.

A drink composed of a small quantity of cinnamon, with gum arabic boiled in milk, employed as an auxiliary to opium, I have found highly useful at this stage of the disorder.

I have dwelt more particularly on the subject of dysentery, because although it did not at any time assume the character or type of camp and epidemic dysentery, it was the principal disorder with which I have had to contend, and was the only one that can be said to have been at all prevalent, as you will perceive by the report for June and July.

Erythema Mercurialis. I have had occasion already to allude to the abuse of mercury. One is shocked to hear how unconcernedly many physicians of the West Indies speak of salivating their patients, and grieved to see the loathsome and painful affections which they have substituted in the place of fevers, liver-complaints, and dysenteries, for the removal of which they had unnecessarily employed it. When the physician, from defect of preliminary education, too limited an experience, or too dull an understanding, finds himself at fault, he flies to mercury as a forlorn hope, which, though it may be the means of extricating himself from an unpleasant dilemma, entails upon his patient complaints that may not only be prolonged through life, but transmitted as an hereditary legacy to unborn generations.

Two of the cases to which I refer, under the head of erythema mercurialis, had been mercurialized for gonorrhœa! Neither of them had ever had chancre, or any symptom of syphilis. In one case, a chronic irritation in the mouth and throat, with rheumatic pains, hypochondriasis, &c., were the consequence of this mal-practice. In the other,

the distressing affection of anaphrodisia was induced. In the first case, I immediately suspended the blue pill and alterative drink which he had been using, I believe, for a year, and put him on tonics, exercise, &c., which soon restored him to health. The other was cured mainly by the local cold bath.

Febris Remittens Biliosa. There have been but very few cases of fevers, much fewer than could have been anticipated from the extreme heat of the first two months of summer, especially in July, in which month, however, they were, as might have been expected, more frequent.

As the summer opened, the few cases of remittent fever I attended became complicated with bilious symptoms, but in none of them did any peculiar phenomena present themselves different from what I had been led to expect from the writings of West India authors, and from similar fevers that I had seen in the United States.

Nor could I discover any peculiarities even in two of the cases that were persons from the north, unacclimated, one of whom had only been a resident here a few months, and was a Scotch clergyman, in the prime of life, of sanguine temperament, robust, plethoric habit, and in the most perfect enjoyment of health. This case happened in May, and the gentleman in whom it occurred, was the very counterpart of those subjects from a northern clime, which are declared to be most obnoxious to yellow fever, on coming into the tropics. If, as some writers affirm, yellow fever be an endemial

indigenous remittent fever of the tropics, incapable of being propagated by contagion or importation, but produced by atmospheric or climactic circumstances, acting within the equatorial regions upon the constitution of those who have recently arrived from cold countries, then I aver that the case of which I speak was a most fit subject for it, and ought to have developed the pathognomonic symptoms of the disease. But if this was a case of yellow fever, and the genuine vomito prieto of the West Indies, then am I willing to declare myself totally unacquainted with it, and bold to say, that it is specifically and widely distinct from the vomito prieto which I have seen at New-York, and from the vomito prieto of the West Indies, described in such glowing and inimitable colours by Towne, Lining, Warren, and the other high authorities upon this disease.

In the particular example to which I allude, and which may be considered as a good specimen of the type of bilious remittent, there were no external agents to which it could be ascribed, excepting the influence of a tropical heat in producing an inordinate secretion of bile, which without doubt was the exciting cause. He had been exposed to no miasmatic exhalations, nor was there any of those diseases that arise from such causes prevailing at the time. Indeed the town had enjoyed uninterrupted health for months. The patient did not labour under any extraordinary degree of arterial excitement at any period of the disease. He had been complaining for two or three days

before I saw him of nausea, vomiting, and some griping pain in the abdomen, and pain across the kidneys, to which last he had been often accustomed, but still went about. I found the pulse 120, and from its strength felt authorized in using the lancet to the extent of $\frac{3}{4}$ xx, which was repeated on the following day. From the invasion of the fever, there was an invincible torpor in the alimentary canal, which, however, was finally subdued on the 4th and 5th days, by the active employment of calomel in pills of grs. x.—xv. each every few hours, alternated with saline and other cathartics. From the second and third days there were evident remissions, usually in the morning towards noon, and again towards midnight, the exacerbations coming on in the intervening periods. There was yellowness but no redness of the adnata, or pain in the eyeballs, but great irritability about the epigastrium throughout his sickness; so much so, that vomiting was excited on sitting up, or on the administration of enemata. This caused me to apply a large blister over that part, and to abandon the idea of using any thing of an emetic property, for fear the coffee-ground vomiting, which Chisholm mentions as one of the occasional symptoms of the worst form of bilious remittents in the West Indies, might be brought on. The bowels having been plentifully evacuated by copious foetid bilious stools, the skin freely opened, a solution of the disease was obtained about the tenth and eleventh days. I discovered immediately that a favourable crisis had arrived, when I perceived

that the skin had been so much unlocked as to excrete perspirable matter in great abundance, with a strong, bitter and bilious odour, that the stools which had been for three days serous and watery, now became thick, yellow, and fœtid, and the urine copious and strongly tinged with bile.

If I had been prescribing for a native, or one who I was satisfied had been acclimated to the country, I should not have hesitated a moment to have administered an emetic, and if necessary, to have repeated it. But in the present instance, intimidated perhaps by the bold asseverations of those who entertain a different opinion from myself, I thought it most prudent to err on the safest side, and therefore declined pushing the treatment to the full extent I thought the symptoms would have warranted.

Furunculus. The hot dry weather of July was thought to have been the cause of boils which prevailed during this month, particularly in children about the face and shoulders.* In a case which occurred in August, these indolent inflammations appeared over every part of the body and extremities of a negro man, aged about thirty, and were so painful as to disable him from work. A mercurial cathartic and low diet, gave immediate relief. The emollient treatment is to be preferred.

Hæmorrhoids. In two bad cases of this disease,

* The extreme hot weather of this month brought out the prickly heat upon almost every one, and in some instances an eruption of coarser and larger pimples, when it was denominated *horse heat*.

the tumours were seated externally, and had existed for years. With the aid of the forceps and scissors, the whole of them were removed, leaving the anus in a perfectly natural and healthy state. Before, however, the cicatrization was completed, it was found necessary in the worst case, to administer enemata of warm oil, warm water, and laudanum, and also emollient antiseptic anodyne poultices.

Hysteria. In the month of June there was an unusual number of cases of Hysteria; and the complaints of females in that and the following month, were usually complicated with hysterical symptoms. The circumstance was perhaps connected with the change of season from spring to summer. One or two cases required venesection and other depleting means; but in general, relief was procured by embrocation of ammonia and laudanum over the epigastrium, the warm bath, enemata, and antispasmodic anodyne drinks ad libitum, until the spasms, globus hystericus, risus sardonicus, and other alarming symptoms had disappeared. I have seen the disease at almost every period of life, from fifteen to seventy.

Leucorrhœa. I have found this distressing complaint equally obstinate and prevalent among the females of this, as among those of a cold climate. The tonic treatment, with few exceptions, is that which is most successful. The worst form of this complaint, is that which is accompanied with dysmenorrhœa at the recurrence of the catamenia. In those cases I have seen the patient suffer the

most excruciating agony from pain shooting from the uterus and pubes up the belly into the breasts, though the circulation was at the same moment slower perhaps than natural, and the extremities cold. Laudanum administered ad libitum, both by the mouth, enemata, embrocations, and thrown up into the womb, together with warm stimulating drinks, and the warm bath, and cathartics, were sure to produce a mitigation, and ultimately a subsidence of these alarming symptoms.

I have found no astringent lotion preferable to another, though I have combined those that have that property, both from the mineral and vegetable kingdoms, in almost every proportion. I have not been able to persuade myself yet, of the propriety of administering lead internally, as recommended by our able fellow-countryman of Philadelphia, Dr. Dewees.*

Mania. I have seen but two cases of Mania upon the island. One chronic, in the person of a French mulatto female, who is said to have been an actress in Martinique. The other was a young black man, a butcher, who was seized with the disease in market, in the month of July, and died the following day.

Peripneumonia. This disease was generally mild in its symptoms, compared with pulmonic affections in the United States, except in Negroes, whose circulation being much slower, and quantity

* The volatile tincture of guaiac was used in one case in which the formation of a false membrane was suspected, and with evident benefit.

of absolute heat consequently much less than in the whites, were of course more sensitive to the vicissitudes of weather, and therefore more liable to the complaint, and required more active treatment. Dr. Tynes, who has been a resident practitioner here for thirty years, and who is a close observer and sound reasoner upon what falls under his notice, informs me that phthisis pulmonalis, especially among the blacks, is by no means a rare disease in this island. He has seen to the number of twelve cases in a year, most of which proved fatal.* The natives, and especially that class of them (the negroes,) whose constitutions are by nature best adapted to a hot climate, are of course the most obnoxious to pulmonic disorders. There are many of the whites who, though born here, are less subject to this class of diseases than they would otherwise have been, from the practice which many parents have of educating their children in England, or, as it is familiarly termed, at home, during which time they lose of course a part of their susceptibility to diseases of cold countries.

Pterygium. [Membranous and fleshy.] I have found this one of the most prevailing affections in the island, and have no doubt but that it is attributable to the constant glare of a hot sun, reflected from the roads, which are rendered almost perfectly white when the rock through which they

* The respective population of black and white was at the time about the same as at present.

are cut becomes pulverized. The houses also being generally painted of a light colour, or when built of the rock, stuccoed over as in Paris and most French cities, assist in producing the same effect.

I have operated upon several persons for this complaint, and never failed to remove the dimness of vision by the absorption which the operation caused, of the thickened membrane of the conjunctiva in the membranous species, and of the red fleshy lymph deposited beneath this tunic in the fleshy species. In the membranous species, that part of the pteryx which is extended over the cornea, is semi-transparent.

According to Mr. Travers, this affection of the eye is much more common in warm than in cold climates.

Rheumatismus. This is quite a common complaint, and is generally caused not by the direct action of cold, but by suppressed perspiration, to which persons are very liable in this climate, upon the least change of temperature, so profuse is this discharge on taking the least exercise in warm weather.

Inasmuch as a residence in a hot climate calls into constant play the functions of cutaneous transpiration, and exacts therefore a more perfect and elaborate development of the apparatus employed in this office, all those agents that have a tendency to increase the action of the cutaneous vessels artificially, must be injurious to health: I therefore very much question the utility of wearing

flannel next the skin, to the extent to which it has of late become so fashionable in the West-Indies.

A large proportion of the saline, ascendent and other excrementitious parts of the fluids which in a cold country are discharged by the bowels and urine, in this climate are eliminated through the exhalent vessels upon the surface of the body; a fact very obvious to the plainest understanding, by the abundant perspiration which takes place, and by its strong *ammoniaco-oleaginous* odour in whites as well as blacks, and also by the scanty, limpid character of the urine,* and the scantiness of the stools. It is this which makes the skin the most important perhaps of all the organs of the body, as a medium through which curative agents may be employed in the diseases of tropical countries. The power therefore which nature has placed at our disposal over this part of the system, ought to be held in reserve, to be used when it can be of most essential service, and not misapplied and wasted by over-exhausting the cutaneous functions during health.

In those who have recently arrived in hot climates, and whose organization has not become moulded or remodelled, as it were, to the new cir-

* Though the greater portion of the West-India Islands are of calcareous formation, and the water which they afford necessarily imbued with this earth, the determination of the fluids to the kidneys and other internal organs is so feeble, that calculous complaints are seldom or never heard of; which, it must be confessed, is an exemption that ought to be esteemed an equivalent, almost for all the inconveniences which one is obliged to endure in a hot climate.

cumstances under which they are placed, the use of flannels, to a certain extent, and for a certain time, may be salutary, by accelerating a process which nature, unassisted by this means, would be more tardy in accomplishing.

But in those who are natives, or whose ancestors have lived for ages in the climate, and whose constitutions therefore have become as thoroughly assimilated to it as the indigenous plants of the country, the use of flannels must not only be superfluous, but highly deleterious.

That species of rheumatism which was seated in the pectoral and intercostal muscles, appears to have been the most prevalent, and was often mistaken for a pulmonic affection.

Synocha. I have seen several cases of pure synochal or inflammatory fever, unaccompanied by any local or organic affection whatever. In one, there was in the beginning profuse epistaxis, which, however, did not supersede the necessity of repeated venesection.

The subject of this case being a negro, there was not that inordinate excitement in the blood-vessels which is usually present in this type of fever. By pursuing steadily and actively the antiphlogistic treatment, the fever gradually abated, and the patient recovered. The tongue during the disease was covered with a bright white thin fur, but there was not the slightest irritability of the epigastrium, or of any other part, except a pain in the limbs, and particularly in one of the knee-joints, towards the termination of the complaint.

So far then as my limited experience goes in tropical fevers, I should not hesitate to declare that the bilious remitting fever, and the ardent or inflammatory fever of this climate are as specifically different from, and unlike yellow fever, [the vomito prieto,] as they are in the temperate zone.

Syphilis. The cases of this disease which have fallen under my notice, were chiefly those in which secondary symptoms existed. The venereal virus seems in this climate more disposed to expend its force in what are usually denominated secondary, than in primary symptoms, owing perhaps to the same law in the physiology of the fluids, which has already been adverted to. Chancres and buboes are much more uncommon than deep foetid ulcerations in the throat, copper-coloured eruptions upon the skin, thickening of the ligaments, ulcerations above the ankles, nodes, warts, tumefactions of the glands of the throat, with sympathetic affection of the auditory nerves causing loss of hearing, rheumatic pains, caries of the bones of the nose and of the small joints of the extremities, &c. I have seen several patients afflicted with the most formidable symptoms enumerated in the above catalogue, in whom not a vestige of primary disease could be discovered in the organs of generation.

Against this peculiarity, however, nature has made ample provision by storing the vegetable world with abundance of plants which possess specific and powerful virtues in neutralizing and

eradicating the taint with which the blood becomes impregnated in this loathsome malady.

Among them are the guaiacum, long so celebrated; the rat-root, milk-weed, and numerous others. All these plants are indigenous to this climate, and possess invaluable alterative properties. In one case, a mild decoction of the milk-weed was the only remedy which seemed to make any impression upon an inveterate case which had resisted all the usual prescriptions. In two other cases the decoction of these plants proved of most decided benefit in conjunction with the mineral acids and tonics. I have of late made use of a compound decoction consisting of the

Rat-root,

Milk-weed,

Guaiacum,

Sarsaparilla, and

Mezereon.—aa. ℥ij. coque in aqua
fontana ℥lx. ad ℥xl.

Typhus. As has been remarked by Sir Gilbert Blane and others, typhus in this climate is a rare disease, except under those peculiar circumstances which favour the concentration of human effluvia, as on shipboard, in prisons, &c. In domestic life this peculiar condition of things seldom or never happens, because the windows and doors of the houses being almost constantly open throughout the year, the air within has a free circulation, and is in every respect as pure as that without. Nevertheless, some particular state of the fluids in an individual may give occasion to the ge-

neration of the disease within the system, without the co-operation of external influences.

Such was the solitary case which is inserted in the table of diseases, and which occurred in the person of a black girl, in a house situated in a most airy and agreeable part of the island, occupied only by the mistress and patient, and free from suspicion of an infected atmosphere within doors or without. The symptoms were not aggravated, but the type of the disease was fairly and unequivocally developed.—The pulse was frequent and soft, the skin dry and hot, and the tongue and lips glazed over with parched scales.* There was great restlessness and anxiety, want of sleep, and occasional delirium; and, what would have been considered rather anomalous in a cold climate, considerable irritability in the stomach, with occasional rejection of the food and medicines administered. There was a torpor also in the alvine and urinary functions, both of which are characteristic of this fever. There was high arterial excitement in the first three or four days of the disease, with bilious symptoms, and some pain about the umbilicus and epigastrium, but no symptom which could lead to a suspicion that the fever was complicated with any organic affection. The first remedy administered was an emetic, afterwards gentle cathartics, and ablutions of cool

* The excretions also between the labia and nymphæ, produced an excoriation of those parts, and emitted a putrescent odour.

vinegar and water, enemata, and then stimulant antiseptic drinks, and effervescing mixtures, by which means a crisis was obtained about the ninth day. It is to be observed here, that the constitution of the native negroes, is apparently more completely assimilated to the climate than that of any other description of persons, on which account they are much more able to sustain, and are much more sensibly affected by the action of emetics than the whites.

I did not perceive in this case the least analogy to the vomito prieto, though this last disease has been by some authors considered a modification of typhus.

Urethritis. The discharge from the urethra in the beginning is very apt to be mingled with blood, which perhaps is salutary so far as it helps to reduce the local inflammation. Tumefaction and induration of the testicles, strictures and fistulous openings are not unfrequently met with among the blacks, as the consequences of this complaint; partly owing to their own neglect, and in part attributable to the mal-treatment and empiricism of overseers, to whom unfortunately the owners of plantations in the out-islands, where no medical aid can be procured, are obliged to entrust the lives of their slaves.

Vaccination. As this disease has of late excited much interest in the United States, it may not be irrelevant to state that during the month of July, I vaccinated gratuitously, about sixty blacks and mulattoes, from matter between glasses received

in the spring from the London Vaccine Institution. Though July is the hottest month of the year, and was this year peculiarly distinguished by its extraordinarily high temperature, the virus by being inserted in its liquid and fresh state, was communicated with as much facility as if the weather had been cool. There was scarcely a single failure, and the vesicle was in every case genuine. I attribute this susceptibility to receive the infection, to the more highly organized condition of the cutaneous tissue in a hot climate, on the same principle which I have already alluded to. In confirmation of which it may be added, that there was in a great proportion of the cases, a good deal of constitutional irritation, which however, did not prevent the successful issue of the local affection. The virus was taken from the arm on the 8th day, at which period it was in almost every instance limpid, and semi-transparent, less turbid apparently than after the same lapse of time in a cold climate.*

* The preceding section of this memoir appeared first in the New-York Medical and Physical Journal, edited by Drs. Beck, Peixotto, and Bell.

WEATHER AND DISEASES OF THE BAHAMAS,

From the first of September to the last of February.

WEATHER.

THERMOMETER, FAHRENHEIT.		September.	October.	November.	December.	January.	February.
Average daily highest elevation, - -		86.86	85.20	81.66	79.22	75.83	77.7
Average daily variation, - - - - -		7.73	7.29	7.36	6.93	7.48	7.71
Highest elevation, - - - - -		90.. at noon on the 3d.	90.. on the 7th, at 2 P. M.	84.. at 1 P. M. on the 7th.	84.. on the 13th at 3 P. M.	82.. on the 1st, at 2 P. M.	83.. at 1 P. M. on 27th.
Lowest depression, - - - - -		77.. at 6 A. M. on the 26th	73.. on 31st, at 6 A. M.	72.. at 6 A. M. on the 12th	68.. at 6 A. M. on the 23d.	62.. at 6 A. M. on 24th.	65.. at 6 A. M. on the 1st.
Average temperature of the month,		83.50	81.50	78.	76.	72.	74.
WINDS.		September.	October.	November.	December.	January.	February.
East, - - - as	- - -	14	4	18	5	9	4
West, - - -	- - -	none	none	none	none	2	1
North, - - -	- - -	none	3	4	6	4	7
South, - - -	- - -	2	5	1	3	3	2
North-east, - - -	- - -	10	16	21	21	12	12
South-east, - - -	- - -	16	30	9	13	7	20
North-west, - - -	- - -	1	none	3	9	15	8
South-west, - - -	- - -	8	1	2	1	8	1
Days of rain, - - -	- - -	12	17	11	10	13	10
Days of thunder and lightning, - -	- -	14	7	1	none	2	1

The Thermometer from which I constructed the above and preceding Tables, hung in a building situated in the interior of the town of Nassau, and was kept in the same position the whole of the year. It ought, perhaps, to be considered a more correct criterion of the temperature, than those instruments which belonged to individuals living upon the Bay street, or on the hill south of the town, as these positions must have been much exposed to currents of air.

From this table it is manifest that January is the coolest month in the year. The temperature is then at its minimum. On either side this point counting backward through the months that in temperate latitudes are denominated autumn and summer, or forwards through winter and spring the quicksilver ascends by measured increments, and with almost mathematical precision, until it has attained its maximum, which as has already been observed in the preceding chapter, is in the month of July.

The greatest depression in the year was 62° at 6 A. M. on the 24th of January.

The uniformity of temperature as compared with the extreme sudden and almost hourly vicissitudes in the climate of the United States, which sometimes exceed 30 degrees in twelve hours, may be judged of by the average daily variation of each month, which scarcely differs a degree the whole year round.

No exact inferences can be deduced from the table of the winds, though it were much to be wished that the data on this part of meteorology were more precise, for upon the influence of the wind, more than upon any other agency, with the exception of the motion of the earth in its orbit, are, in my opinion, the variations of temperature in that climate to be ascribed.

The trade winds, (i. e. from the N. E., S. E. and E.) as in all the equatorial regions, prevail the greater part of the year. In the Bahamas during the period referred to, they exceed, it is seen,

those from all other quarters of the compass in the ratio of nearly 5 to 2, which is more than double ; and compared with the cold winds from the N. W. and N. they prevail in a ratio of 5 to 1.

When the accumulation of cold during winter in countries surrounding the northern pole has reached its maximum, the tendency in heat to acquire an equilibrium, propels forward with an accelerated velocity towards the arctic circle the warm blasts of air from the torrid zone. The current of cold northern wind which these displace, sets towards the south, so that this law in the physical world, as well as the greater distance of the sun during winter from the tropic of cancer, causes the mercury in the Bahamas to be more depressed during the month of January than in any other part of the year.

There are therefore but two seasons in this climate, *Winter*, which is as mild as our month of June, and lasts from the beginning of November to April ; and *Summer*, which comprises the other seven months of the year. But even between these two divisions the line of separation is scarcely sufficiently perceptible to be distinguished ; so gradual, as has been before remarked, are the decrements and increments of caloric, and so unvaried throughout the year the bloom and verdure of vegetation. Though from a cold climate, my sensations, after residing in the Bahamas less than a year, had become so morbidly acute by the incessant action of a high temperature, that the depression of the mercury in October to below 70°

seemed to me disagreeably cold. The natives of the climate were equally or more susceptible than myself; but always hail with joy the arrival of this change, as the harbinger of what cannot but be considered as a mere apology for winter to those who have been accustomed to behold it clothed in all the desolate grandeur of northern scenery.

There has nothing fallen under my observation to justify the division of the year so commonly made, and so currently received, into a dry and rainy season.

September. On Sunday the 12th, at midnight, a gale commenced from the N. E. and N., which increased to such violence on the morning of the 13th, as to assume the character of a hurricane, a thing which had been much spoken of and apprehended all summer, from divers signs and prognostics. Every necessary precaution was now promptly taken to meet the approaching crisis, and nothing was heard on this and the preceding day in different parts of the town, but the noise of hammers employed in battering up the window-shutters, and propping with huge beams the weak and exposed parts of the houses. About 10 o'clock A. M. it began to blow with great violence from the N. E., accompanied with rain, and the scud flying with great rapidity. At noon it reached the zenith of its power. The wind by this time had veered gradually round to N. and N. W., and in the afternoon and night, at which period the gale had quite subsided, the vane had reached as far as S. W. and S. Early in the morning several flocks of the *man of war bird* had passed over the town, flying

very low down, which is said to be the immediate and certain precursor of a hurricane. The peculiarity of a hurricane is, that the wind blows in puffs and sudden blasts, with a noise not unlike the steam when let off from the boiler of an engine, and with dead pauses of several minutes intervening. It seemed as if we were in a dreadful gale at sea, to which situation indeed it might well be compared, for the bleak position, low elevation, and circumscribed dimensions of the different islands of this groupe, place them under circumstances not dissimilar to that of a ship on the ocean.

September has been perceptibly cooler than any month since spring. Besides the reduction of the quicksilver, the wind evidently inclined more to the north. Scarcely a day passed in which the vane, though most of the time south of east, did not in the course of the morning get round to the northward, and remain there for hours. This tended much to cool the air. The nights, which are suffocating in summer for want of sea-breezes, now became pleasantly cool, and the humidity of the atmosphere was less in the aggregate than during the last month. This month, however, as a whole, did not seem so agreeable as August; because, perhaps, the transition from July to August in the diminution of temperature was so much more perceptible than from August to September. By accounts from the out-islands, it appeared that the tornado blew with most violence in the vicinity of Crooked Island, two or three hundred miles to the

eastward of Nassau. As usual it blew in a vein, the extreme limits of which passed over the island of New Providence.

No houses were blown down at Nassau, but the fruit trees suffered a good deal, and the ground in the orchards was literally strewed with unripe oranges and avocado pears. Though much of this crude material was brought into the market, fewer cases of dysentery were produced by it than might have reasonably been anticipated. There has seldom been a healthier September. There were a number of cases of catarrhal fever among children, and dysentery declined with the disappearance of the indigestible fruits which had occasioned it.

October. This was a very healthy month, and remarkably so for the natives, who, perhaps, from being less capable of resisting the transition from summer heat to autumnal cold, than foreigners from the north, are said to be more frequently taken sick in this than in any other month.

There was scarcely a case of sickness the whole month, and not one that could be ascribed to atmospheric influence. According to Hillary of Barbadoes, one would imagine that each month in the West-Indies had its peculiar epidemic and endemic. He graduated his pathological speculations too much upon thermometrical and barometrical calculations.

Though the quicksilver on several occasions ascended very high, and on the 7th as high as 90°, it remained there not generally longer than an

hour, when it again began gradually to descend. This constituted a striking peculiarity in the heat of October, contrasted with the preceding months, during which the mercury, after reaching the extreme point of diurnal elevation, was often observed to remain there for several hours successively. This was a much drier month than September; and the weather, with the exception of one or two sudden changes of temperature, has been unusually steady. The sun in the middle of the day shone out hot, but the evenings were delightfully cool; yet the month itself has been one of the hottest Octobers known in several years.

Some bilious remitting and bilious continued fevers occurred in the latter part of the month. Also, some intermittents, the more legitimate offspring of paludal exhalation, made their appearance in the vicinity of the marshy salt water pool on the eastern skirts of the town, a little above the Poor's House. The intermittents were also complicated with bilious symptoms, as were likewise all the fevers met with at this time.

November. This month, with one or two exceptions, was without thunder or lightning. There fell at no time any great quantity of rain, nor was the sun often obscured longer than a few hours in the forenoon. The weather was very pleasant and uniform in its temperature, and undistinguished by any thing peculiar in its phenomena. It may indeed be considered the first of that succession of delightful months which constitute the cool season

of this climate, but which are never prolonged beyond the 1st of May. Besides the autumnal fevers, there prevailed during this month a mild catarrh.

December. This was a delightful month, equable throughout in temperature and humidity, but in general more cool and dry, than hot or humid. There were no electric phenomena, less even than in the last month. The rain when it came, did not fall suddenly in torrents as in the summer months, but gently and steadily. In this climate I have never observed any of those appearances in the heavens, which in cold latitudes often precede for several days the approach of storms. The rain and clouds seem to form almost simultaneously. As usual the month has been uncommonly healthy, owing perhaps to the circumstance of the orange being the only fruit in season. The only part of this healthy fruit used is the juice: the pulp being discarded. There were some broken heads to repair, and burns to dress among the negroes and lower description of whites, during the Christmas holidays, produced by brick-bats, fire-works, &c.

January. North-western winds were very frequent during the month, which has rendered the average temperature much lower than in December. These winds are almost always blustering, and after blowing a few hours cool the air very rapidly; so much so as to make it quite uncomfortable if they continue, as they often do, for four or five days. The moment the wind begins to veer round to a single point, East of North, *i. e.* so as to come off

the ocean instead of the continent of America, it abates in violence, and a marked amelioration of temperature is immediately perceptible. This month has been, if possible, more healthy than the preceding; the constitution, as the winter, if so it may be called, advances, becoming more habituated to the cold, and less liable to those complaints, which the change from a hot to a cool season produces. There has been an unusual quantity of rain for this month, falling with less violence, but equally short in duration with the showers which are frequent in summer.

February. So humid and rainy a February had not been known here in many years. It is usually a very dry month. Though it was a very healthy month, much sickness was anticipated in the summer from the quantity of rain that fell.

DISEASES.

	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.
Abscessus - - - - -			1			1
Asthma - - - - -		1		1	2	
Bronchitis - - - - -				1		
Calculus - - - - -				1		
Cataracta - - - - -						1
Cephalalgia - - - - -		1				
Coxalgia - - - - -				1		
Dysenteria - - - - -			2	1	1	
Dysmenorrhœa - - - - -				1		
Dyspnœa - - - - -			1			
Erythema Mucosa - - - - -			1			
Febris Intermittens Quotidiana -	1	2	4			
Febris Intermittens Tertiana - -				1	1	
Febris Intermittens Quartana -				1		

	Sep.	Oct.	Nov	Dec.	Jan	Feb.
Febris Remittens - - - - -	1					
Febris Remittens Biliosa - - -	2	1	4	3		
Febris Remittens Infantilis - -					1	
Febris Synocha Biliosa - - -	3	3	2			
Febris Typhus - - - - -	1					
Fistula Lachrymalis - - - -		1				1
Furunculus - - - - -				1		
Ganglion - - - - -				1		
Hæmoptysis - - - - -					1	
Hydrocele - - - - -		1				
Hysteralgia - - - - -			1			
Hysteria - - - - -			2	1		
Leucorrhœa - - - - -	2		1	1		
Mastitis - - - - -				1		
Menorrhagia - - - - -	1					
Odontitis - - - - -						1
Odontalgia - - - - -		1		1		
Ophthalmia tarsi - - - - -	1	1			2	
Orchitis - - - - -			1	2		1
Otalgia - - - - -		1				
Parotitis - - - - -					1	
Paronychia - - - - -				1		
Pemphigus - - - - -					1	
Phlegmon - - - - -				1		
Podagra - - - - -				1		
Polypus nasi - - - - -	1					
Pterygium - - - - -		2				
Raucitas - - - - -	1					
Scrophulus - - - - -	1					
Suppressio mensium - - - - -						1
Surditas - - - - -				1		
Syphilis - - - - -	1				1	
Tinea capitis - - - - -			2			
Tonsilitis - - - - -				2		
Tumor - - - - -			2			
Ulcus - - - - -					1	
Urethritis - - - - -	1	2	1			1
Ustio - - - - -				1		
Venenum - - - - -	1			1		
Vermes - - - - -		2	2	1		
Vomitus a potu - - - - -				1		

LIFE has been compared to a torch preserved in a state of combustion by the air inspired into the lungs. The carbon and hydrogen of the blood furnish the fuel for consumption, and the oxygen with which they come in contact while passing through the chest in respiration, furnishes the spark which kindles the flame.

It is not by the respiratory apparatus only that the blood is decarbonated and dehydrogenated. The ammonia and oil* excreted in such abundance from the surface of the body in hot climates, prove that the cutaneous functions are also concerned in this salutary operation, which in whatever organs it may take place, seems to be chiefly intended to preserve the different parts of the animal machine at one uniform degree of temperature. How admirable are the means by which an overruling Providence has contrived to bring about this result under whatever circumstances of climate or locality the human frame may be placed ! In arctic or polar countries, where the heat is rapidly abstracted from the body by the reduced temperature of the circumambient air, a greater quantity of caloric is required to be generated. For this purpose the food is made to consist almost exclusively of animal fat and oils, which abound in

* Though the water which is discharged to such a prodigious amount from the skin consists of hydrogen and oxygen, this excretion cannot be considered as having any agency in the process described, when it is recollected that this element constitutes the bulk of the nutriment used in hot climates, and that it passes off from the skin in the same chemical state in which it was taken into the stomach.

hydrogen and carbon, while the more condensed state of the atmosphere, by furnishing a larger quantity of oxygen under the same bulk, also contributes to accelerate this process. The chest also seems fuller and more expanded in its conformation, and the pulmonic apparatus cast upon a large mould. The blood thus becomes enriched and inspissated, of an oily consistence, highly inflammable, and of a dark colour. The functions of the skin are dormant, and no caloric is expended by cutaneous evaporation. Life, by the centripetal tendency of the fluids, is thrown from the surface of the body into the large vessels of the circulating system and internal organs.

It is this more highly animalized and acrid condition of the blood, realizing as it were the speculations of Hunter, that makes perhaps organic inflammations more common in cold than hot climates, and favours the orthodoxy of modern pathology in treating the fevers and phlegmasiæ of cold countries by direct depletion of the blood-vessels, rather than through the more circuitous medium of the alvine, urinary, and perspiratory secretions. Whereas in hot climates the lancet is employed not so much to reduce the tone of the system, or to alter the qualities of the blood, which is here thin and impoverished, but to relax spasm, and retard the momentum of the circulation.

In a hot climate the respiratory, digestive, and cutaneous apparatus co-operate in such a manner as to retard rather than accelerate the generation

of caloric. The lungs are smaller in dimensions, the chest narrower and flatter, the air highly rarefied, and the quantity of oxygen inspired therefore much less. The circulation also is slower, and the food consists principally of cooling sub-acid vegetable juices, which dilute the blood, and render it almost as limpid as water.*

The blood thus attenuated and impelled by a centrifugal tendency to the surface of the body, passes incessantly without difficulty, and in prodigious quantity by evaporation through the emunctories of the skin, thus carrying off the caloric out of the system oftentimes more rapidly than it is generated within, or can be communicated from the heated atmosphere without. So highly elaborated are the organs of cutaneous transpiration, and so profuse the discharge which issues from its exhalent surface in a hot climate, that this part of the body may be considered the great outlet or drain of nearly all the excrementitious portion of the fluids, and to have almost superseded the use of the alvine and urinary functions.† Much of the hydrogen and carbon also, which by this theory, form the combustible and inflammatory ingredients of the blood, are conducted harmlessly out of the

* The pulse is perceptibly more compressible in a hot than cold climate.

† The excretions from the skin in hot climates are extremely pungent and offensive, being strongly impregnated with acescent, saline, ammoniacal and oily matter, as has already been observed in the former part of this memoir.

system through the medium of the skin in their undecomposed state, without being oxygenated, and therefore without being attended with the extrication of caloric, as they are supposed to be in passing through the lungs.

It is easy to conceive that an organ which, in a hot climate, plays so important a part in the animal economy as the skin, would, when deranged in its functions, have much to do in the production of disease.

Though there is no part of the year in the Bahamas that can be legitimately denominated winter, the transition from the hot to the cool season is sensibly felt, and the cold, though not ordinarily sufficiently concentrated to produce, as in cold climates, acute or entonic inflammation of the viscera, gives origin to an extensive order of diseases by the retroversion, or by what has been with more propriety perhaps emphatically termed, the revulsion or defluxion of the humours from the surface of the body upon the mucous membrane which lines the internal passages. The irritation occasioned by the actual transfer of this accustomed drain from the skin, and of the acrid ingredients of the perspirable matter, shows itself in a variety of morbid changes, which are rather to be considered functional than organic, and resembling congestion or serous effusion more than inflammation. Among these effects are catarrh, hydrothorax, bronchitis, asthma, &c. The predisposition to disease occasioned by the enervating influence of the hot season upon the digestive organs, may explain

why dysenteries, cholera, &c., as an exception to this remark, are more liable to be caused, as has been seen by the sudden alternations of heat and moisture in hot weather, than in the cool season when those organs have recovered their tone.

If it be the *lungs* in a cold climate that kindle the lamp of life, it is the *skin* under a tropical sun that dampens the fire, and prevents the flame from burning with too much vehemence.

Dyspnœa. This was in every respect a remarkable case, complicated with symptoms, which, taken into conjunction with the treatment, and the fatal manner in which it finally terminated, might afford just reason to doubt whether it belonged to asthma or hysteria, or constituted a new disease of itself. The patient was short in stature, straight and well proportioned, of large bones and great muscular strength, which she retained in all its perfection, though arrived to the extreme age of ninety-four years.

When at the age of seventy-four, then living at New-York, she has frequently lifted and carried a weight of one hundred pounds.

Was not this high degree of tone and energy in the muscular system connected with the more perfect development of the respiratory organs, which by the conformation of her chest, had been evidently intended for a cold rather than hot climate? For as it appeared, she was born in Ireland, but had left it young. The pulse in health, was strong, full, regular, and unusually tense: the animal func-

tions, as well as those of voluntary motion, and of the mind, seemed scarcely to have lost any of their vigour by age.

The patient when seized, was attacked generally at midnight with extreme difficulty of breathing which could only be effected in the upright posture, a loud rattling noise in the trachea, and at each inspiration the thorax laboured with such violence, as to appear to be convulsively spasmed; the respiration though hurried and laboured, was without the slightest pain, and unattended with the peculiar wheezing sound which distinguishes asthma, but accompanied with a distressing palpitation and sense of suffocation, the last of which symptoms is common in that disease, and not unfrequent in hysteria. No cough or very slight, and no expectoration before, during, or after the attack. The pulse corresponding to the respiration was full, frequent, hard and impetuous, amounting to 140 and 150. The extremities, particularly the hands, were clammy and had a death-like and marble coldness; seeming the more extraordinary, as the thermometer during one of the attacks, (Nov. 11, 1825) was as high as 83°. Yet in the midst of these ferocious paroxysms, to which her life ultimately succumbed, she conversed as rationally as in health, and never complained of weakness or pain. The only premonitory symptom was flatulence, which almost always immediately preceded the attack; it was occasioned, as she thinks, by indulgence in cabbage and other indigestible food of that description, to which she

was exceedingly partial. On three successive occasions upon which I attended her, viz. Aug. 9th, Nov. 7th, and Nov. 11th, 1824, she was instantaneously restored to health by the loss of xxiv. oz. to xxx. oz. of blood, taken quickly by means of a large orifice. This treatment immediately reduced the pulse from 150 to 75—80. Between Nov. 7th and Nov. 12th of the same month and year above stated, she was bled altogether to the extent of *ninety ounces*, which is three-fourths of the entire quantity of blood contained in the body, according to the computations of MULLER and ABEILDGAARD! But though the frequency of the pulse was immediately diminished by each successive depletion, the patient, notwithstanding her extreme age, never complained of faintness, not so much as to keep her bed for an hour; on the contrary, she said it made her feel stronger.

In the month of January 1825, she suffered repeated attacks from this afflicting disorder, and did not, after venesection, experience that complete relief from this remedy, she had before been accustomed to. The inspirations were laborious and convulsed, but the pulse lost its compressibility, and the rattling noise in the trachea was no longer heard, the affection assuming now more the appearance of asthma.

Feb. 1, 1825. Has been gradually growing weaker daily, declining all nourishment, breathing with less difficulty than before, and without wheezing or rattling until a few hours previous to

dissolution, which took place on this date. She retained possession of her senses to the last.

The disease which comes nearest to the above complaint of any I have read, is described by Dr. Good under the denomination of *Dyspnœa Exacerbans*.*

Erythema mucosa. I have given this name to a peculiar species of adynamic, or atonic inflammation upon the mucous membrane of the tongue, mouth, and fauces, which is most usually symptomatic, but sometimes idiopathic. It is characterized by a fiery redness in the colour of the lining membrane without tumefaction, and especially by an inflamed and elevated state of the papillæ, which appear towards the apex of the tongue like little red or livid points. The surface of the parts is also dry and shining in fatal cases. It is *idiopathic* in persons who have indulged too freely in spirituous potations, disappearing with the cause which produced it. It is *symptomatic* more particularly according to my observations in the following diseases.

Phthisis Pulmonalis—last stage when there are colliquative sweats, œdematous legs, and other fatal symptoms.

Hydrops—Generally here one of the most certain prognostics of speedy dissolution.

Dysenterya—where the disease has been protracted, and great exhaustion and emaciation has

* Study of Medicine, vol. i. p. 368.

taken place. Not always a fatal, but invariably an alarming symptom.

Diarrhœa. Here I have seen it a fatal symptom, the surface of the parts being also dry and glistening, as it is likewise in the termination of dropsy and phthisis.

Remittent Fever. Sometimes, but rarely it is a symptom of the protracted debility and torpor of the biliary and digestive organs, which succeed to a severe attack of this disease in hot climates, even in cases where there were no previous suspicions of the abuse of mercury.

Tenesmus. In a married lady about twenty-six years of age, of a very delicate habit, a tenesmal diarrhœa occurred after every indiscretion in eating, and with it there appeared also as a concomitant symptom, an erythematic inflammation of the mucous membrane lining the mouth, accompanied with a very troublesome soreness, particularly of the tongue. This affection always disappears with the tenesmus on having recourse to tonics, as cold bath, bitters, &c. with a particular regard to diet. In this case it was not an alarming symptom.

Yellow Fever. I have in another place described this symptom, as one of the attendants upon the last and fatal stage of Yellow Fever.*

* An account of the Yellow Fever as it prevailed in the city of New-York, in 1822, by P. S. TOWNSEND, M. D. p. 159.

Febris Remittens Biliosa. Although October, taken as a month, was unusually healthy, sickness began to set in the last few days of it, and became very general in the beginning of November, in the centre, as well as suburbs of Nassau, notwithstanding the supposed exemption of the former. It is true, however, that the eastern and western skirts of the town suffered more than the compact and more thickly settled part of it, which is between the two extremes. For to the eastward especially, there is nearly opposite the Poor's House a considerable tract of marshy ground more or less covered with stagnant brackish water, intersected by small ditches which communicate with the harbour, from which it is but a hundred yards distant. Intermittents prevailed in this vicinity, and usually took on the quotidian character, continuing very obstinate while the patient persisted, or was obliged to reside near the sources of the disease. The most violent and dangerous form of disease now prevalent was the Remittent Fever, complicated with, and particularly characterized by bilious symptoms as were also the Intermittents. The exacerbations in the remittent type were most frequent in the day, beginning about 10 A. M. or noon, going off towards midnight in perspiration and urine, more or less profuse, and with a cool skin. During the fever the skin was preternaturally hot, especially about the epigastrium, chest, neck, arms, head and abdomen, but not so much so on the lower extremities. Sometimes there was present also during the fever a moisture

in different parts. There was generally great restlessness and tossing from side to side, but seldom or never delirium, even in the height of the exacerbations. The pain was greater in the head than in any other organ, and extended across the forehead occasionally to the eyeballs, over the adnata of which there were generally observable a few large red vessels, radiating from the canthi to the cornea, but no suffusion of tears or watery appearance of the eyes, rarely intolerance of light, *and never any of that extreme pain, or bloodshot, turgid, and inflamed state of the balls, so frequently seen in the vomito prieto.* There was, in some cases, considerable soreness about the epigastrium, but very seldom a burning or tenderness there. The præcordial irritation did not usually amount to any thing more than the irritation in that part, which is found here in fevers of every type; the stomach, from its highly organized construction and extensive sympathies with the skin and other important functions of the system, being rendered still more sensitive to morbid impressions, and still more predisposed to disease by the debility and exciting influence of a hot climate. In the fever now under consideration, the irritation was mainly attributable to the regurgitation of bile upon the stomach, as was satisfactorily proved by the copious discharge of yellow or dark green clotted bile in vomiting, and the relief obtained therefrom, or when the evacuation was turned downward upon the alvine passages. The adnata, and sometimes the skin, generally, was also tinged yellow, *not mottled or of a deep dingy*

hue, but of a bright yellow golden colour, and varying, sometimes according to the complexion and temperament. And this colour exhibited itself in the very beginning, sometimes going off and sometimes increasing, as the disease advanced, and appearing more conspicuous on the eyes towards the termination of the complaint, from the red vessels having, at that time, usually disappeared.

The pulse varied from 120 to 160—180, but *never as in yellow fever fell as low as the natural standard*. In a majority of cases there was not, during any period of the disease, a perfect apyrexia, but only a remission, the pulse seldom or never sinking lower than 100. Sometimes the exacerbations were suddenly broken, or recurred several times in the twenty-four hours, the skin, during their continuance, being mostly dry, but whether moist or dry, always of a biting heat. In the exacerbations the patient felt an accumulation of strength, but during the remissions complained of exhaustion. The tongue was usually moist, never black and dry, ordinarily of natural size, with a thin yellowish white fur upon it, *without the least appearance of the defined margin seen in the vomito*, though the central part was generally more furred than the edges. There was seldom much thirst. Sometimes there were, during the exacerbations, wandering severe pains in the extremities or in the *muscles* of the abdomen, chest, or loins, removed by anodyne embrocations, and seldom requiring blistering; *but the pain did not follow in the track of the vertebral column, in a distinct well de-*

*finest route, as in yellow fever.** Venesection was seldom necessary, except in northern constitutions and robust habits, and then only in the commencement of the disease; for the pulse, though always very frequent and irritable, was never very tense, but almost always easily compressed by the finger. Except in persons of colour, or where the vomiting was not free, emetics were hazardous, unless their action was inverted upon the bowels. The mild treatment by effervescing draughts of Riverius, Seidlitz, and soda powders, calcined magnesia, and from time to time active mercurial cathartics, (sub-mur. hyd. grs. x.—xv. c. jalap. grs. xx.—xxx.) and especially large blisters applied early to the back of the neck or epigastrium, as the head or stomach seemed most affected, was by far the safest, most successful, and most efficacious plan of cure. After the primæ viæ had been attended to, and the exacerbations continued to return, the following mixture, administered daily, to the extent of one or two table-spoonfuls every two hours, had a happy effect in composing the patient and unlocking the skin:

℞ G. Camphor
 Sp. Æther Nit.
 Sacch. Alb. aa. ℥ij.
 Aq. fort. ℥viii.

Ablutions of vinegar and water, tepid or cool, according to the degree of heat or dryness of the

* See my account of the vomito already quoted, p. 177.

skin, the season, &c., constantly applied, together with the pediluvium and semicupium daily, deserve particular mention, as remedies which did more, perhaps, than any other, to retard the vascular action, to reduce and equalize the unnatural temperature of the body, and to remove that extreme irritability and restlessness which these symptoms occasioned. *The irritation of the stomach, unlike that of the vomito, subsided as the disease advanced.* A crisis occurred usually after the 9th, or before the 14th day. The type of the disease, as was evinced by the treatment and protracted convalescence, was more asthenic than inflammatory, owing, perhaps, to the deleterious and depressing influence of bile upon the sensorial functions. In jaundice, for example, there is often little or no arterial excitement, but rather a torpid and sluggish condition of all the organs, and here the obstruction to the excretion of bile is so complete, that it is entirely regurgitated upon the blood vessels.

In females, the remittent fever we have been describing was usually complicated with hysterical symptoms, and in some women far advanced in pregnancy, the disease, though less manageable, was as well characterized, and as legitimately evolved as in those who were not in that situation. In children, the excitation of the arterial system was greater, and the remissions less distinct. The diet consisted of plain mild diluent drinks. Acids too often disturbed the stomach.

This endemic bilious remittent of the West Indies, as it is called, unlike yellow fever, with which

it is so often confounded by ignorance or design, *seldom proved fatal.* *The natives were most obnoxious to it,* and it did not appear as early as usual this year, owing perhaps to the extraordinary heat of the summer extending farther into autumn than commonly happens. In reference to bark, of which so much is said in the tropics, there can be no doubt of its efficacy, and often of its necessity, in the protracted atony, which succeeds to the intermitting and remitting fevers of hot climates. It is however administered too indiscriminately.

CASE. In the case of a woman, aged 26, in which bilious remittent fever supervened in the sixth month of pregnancy, there was partly owing, no doubt to this circumstance, an uncommon deal of irritability at the epigastrium, with almost constant nausea and bilious vomiting, but unlike yellow fever, the retching was attended with violent efforts. On the fourth day of the disease there came on vomiting of thin yellow bile, mingled with blood of a bright red hue, which appeared to have been recently poured out from ruptured vessels in the stomach. *These were blended with some clotted or coagulated specks, of a reddish brown colour, resembling, in some degree, the matter of coffee ground black vomit.* The pulse was 140 to 150; the skin preternaturally hot; a violent pain at the umbilicus, and some pain in the small of the back, both caused, perhaps, by the state of pregnancy; great distress at the epigastrium; extreme restlessness, anxiety, and moaning, but none of the pathognomonic symptoms of yellow fever.

These aggravated symptoms all subsided in less than twenty-four hours, by the following treatment: V. S. z^{xxiv} ., a large blister on the stomach, four grains of opium in pills administered at once, effervescing draughts of Riverius, laudanum in the camphorated mixture, arrow root, brandy toddy, &c. Some sleep was thus procured, and the bile, with which the stomach seemed to have been engorged, passed freely downward through the bowels, *of a fætid odour, and highly tinged with what appeared to be fresh blood, of a brick-dust colour, but entirely different from the jet-black, ink-like, decomposed, inodorous evacuations which sometimes characterize the alvine discharges in the vomito prieto.* The next day (Nov. 10th) there was an apyrexia, and *there was not the slightest soreness or irritation at the præcordia, whereas this symptom always becomes more distressing in the vomito as the disease advances.* The alvine evacuations also ceased to be bloody, the ruptured vessels upon the coat of the stomach having cicatrized or contracted.

Nov. 11. An exacerbation usually comes on at night, and to-day the vomiting supervened, *but without blood.* Relieved by the mist. camph. cum tr. theb., and by revesicating the blistered surface upon the epigastrium. The bowels were opened by magnesia.

Nov. 12. Felt to-day the motion of the child the first time since she has been sick, and complained of some bearing down. This symptom was removed by the anodyne mixture as before; brandy toddy continued.

The prostration of the vital energy is so sudden in hot climates, that one is obliged to pursue often the phlogistic and antiphlogistic treatment at one and the same moment. In getting rid of the causes of disease by the aid of the lancet, and through the medium of the bowels and skin, there is danger of exhausting the vital forces to a point from which recovery is hopeless.

Nov. 13th, being the 9th day, a solution of the disease was accomplished in the form of copious evacuations of natural bile by stool, and in perspiration and natural sleep. The appetite returned on the 15th, but it was not until the 17th, which was the 13th day of the fever, that the force of the circulation seemed to have been spent; the pulse falling on that day, for the first time, as low as one hundred and two beats in a minute, which is another symptom greatly at variance with the vomito.*

In the common parlance of many medical writers, this case would have doubtless received the cognomen of yellow fever, and is a fine example to show how easily this disease may be counterfeited, and how readily therefore error may be disseminated by ambiguity of language, and carelessness of discrimination.

* In another white female where this fever came on in the last month of pregnancy, and where blood was let on the first day, a crisis occurred on the 9th day, and on the 14th, the patient was delivered of a stout healthy child. In another case of a Scotchman aged 30, of a robust healthy constitution, a crop of large boils appeared about the hips on the first day, which, by effecting a partial metastasis of the fever, greatly mitigated its violence.

Febris Synocha Biliosa. This is the ordinary inflammatory continued fever of one paroxysm without any remission, associated as often happens in hot climates, with bilious symptoms.

One of the most violent cases of Synocha I ever witnessed, and where the arterial excitement was carried to so high a degree as to become perfectly unmanageable, occurred not in a new comer, as is usually the case, but in an uncommonly stout mustee girl of nine years of age, and a native of the climate. She was taken down in the latter part of September, which is one of the hottest months in the year.

The fever continued four days. The pulse was full and tense, and during this time varied incessantly between 160 and 200, except for a few hours when it sunk to 130, in consequence of venesection and the powerful operation of an emetic upon the bowels; skin dry, but not remarkably hot in any part; tongue covered with a clear, white fur, and the edges clean, and of natural colour. Severe pain and great uneasiness towards the top and front part of the head, and in the eyeballs; no red vessels or yellowness on the adnata; some pain in the abdomen, sighing, jactitation, moaning, a great deal of thirst. On the 3d day, though she had lost the day before, half a pint of blood,* and had more than twenty alvine evacuations of a bilious nature, from the emetic which had been taken, the

* Her hair, of which she had a very abundant supply, had also, as is usual in fevers here, been all cut off and shaved close.

fever raged with the same alarming impetuosity as at the beginning of the attack. Convulsions also now supervened. Both temporal arteries were opened, and the vein in the other arm, a large blister was applied to the back of the neck, also blisters to the ankles, laudanum and ammonia internally, enemata, warm bath, &c. all to no purpose.

On the 4th day, though she had lost at least xxx. oz. of blood, she died comatose, the fever terminating apparently in compression upon the brain.

A worse case than this, however, and which ran through its fatal course with still greater violence than the one already related, happened in the person of a remarkably robust and coarse made Scotchwoman, of sanguine temperament, who had the indiscretion to come out of her cold native country, in the north of Britain, into the hot climate of the West Indies, in the middle of July, when the thermometer is ranging at the highest point of elevation, being at the very time of her illness, 89 and 90 degrees F. She was of sanguine temperament, and in the fullest health. Here then was a fair opportunity to test the experiment, whether the vomito prieto, may, as has been most dogmatically asserted, be generated *de novo* or *ab ovo*, by a concurrence of circumstances like those in which this patient was placed. But fatally as it terminated, there was more incongruity and discrepancy in the parallel between the two diseases, than between the vomito, and any other fever of the tropics. The symptoms were a high inflammatory fever. with acute and constant pain

throughout the head; hot skin, bilious thick fur diffused over the tongue, hard, full, frequent pulse without the slightest gastric irritation, or turgescence, or redness of the eye-balls. These symptoms continued with unabated violence, and without the least remission or change in the character of the complaint, until the 5th or 6th day, when coma supervened, and the patient expired. The treatment was venesection to LX. oz. active mercurial cathartics, shaving the head, and large blisters there, and to the back of the neck, &c. &c.

Yet the vomito has been misnamed by some writers the *Ardent Inflammatory*, and *Ardent Bilious Fever*, of new comers in the tropics.

This case especially, and others of a similar nature, that I saw during my residence in the West Indies, strengthened and confirmed me in the opinions on the subject which I had already inculcated in my *History of the yellow fever of New-York in 1822.*

Fistula Lachrymalis. This disease is frequently met with in the Bahamas, owing perhaps indirectly to the same causes that render pterygium so prevalent. In one case it existed in both eyes; and the obstruction of the nasal ducts proving obstinate, was removed by cutting down upon the sacs, and introducing silver styles in the manner in which this operation is usually performed.

Ganglion. A case of a mulatto girl, where one of these encysted tumors had been formed for some time on the wrist, was instantly dispersed by percussion, leaving the part as smooth and level as if

no disease had ever existed. The operation had the effect of magic on the patient and bystanders.

Hæmoptysis. This was as well defined a case of hæmoptysis as I have ever seen in a cold climate, and occurred in the case of a mulatto woman, from suppression of the catamenia. It was cured by venesection and the usual remedies.

Raucitas. In a black man, in whom this symptom occurred to a distressing degree, as one of the consequences of a syphilitic affection, the voice was restored by the internal use of diluted muriatic acid, a gargle of what is called in the West Indies pepper vinegar, (i. e. the cold infusion of the bird pepper in vinegar, in the form used on the table as a condiment,) and the alterative drink already recommended in the previous part of this memoir.

Syphilis. There is a copper-coloured eruption, well known as one of the cutaneous affections which occur in secondary syphilis, and which usually ends in successive desquamations of the cuticle, but sometimes also in a phagedenic irregularly shaped ulcer in the cutis, more particularly about the ankles, forming a kind of spurious chancre, which, when healed, leaves a depressed discoloured cicatrix, corresponding to the size and shape of the previous ulcer.

In some cases the eruption throws itself off in desquamations only, seated more especially upon the palms of the hands, soles of the feet, manmæ, and sometimes spreading over the whole surface.

In several of these cases, and particularly in one or two women, there was reason to doubt the ex-

istence of venereal taint, except so far as it may have been communicated by hereditary descent.

In every case a complete cure was effected by a strong wash of the corrosive sublimate, dissolved in diluted alcohol.

In a black woman, aged 40, in whom it had spread over the mammæ, and assumed, as it did in several others, upon this part a squamo-purulent character, the disease had existed *ten years*, and had supervened upon the cure of itch. She was entirely cured by V. S., salivation, and the wash above described.

There is also a malignant species of whitlow, which is sometimes met with in old cases of lues, accompanying this desquamation. It is exceedingly difficult of cure, and may last for months, ending in the loss of the nail, and sometimes destruction of the joint. Dilating the part to the bone, and heating applications, seem to be as ineffectual here as blisters externally to venereal ulcerations in the throat. A particular antidote is required to neutralize the syphilitic poison which has occasioned the disease, and this, whatever it may be, is known to reside more in the virtues of certain mild vegetable decoctions (which are supposed to act by producing some chemical alteration in the fluids) than in any other substances of the materia medica. The fact applies also to the external lotions which were found most beneficial in this affection, and which proved to be those that were made by infusion of the leaves of mild herbaceous plants.

ALBINO. One of the cases of syphilis that fell under my observation was a black woman from the out-islands, which is particularly recollected from the anomaly of her suckling at the time an *albino* infant some six months old. The father was as black as the mother, who was then holding it in her arms, and the skin of the infant was as white as that of the most delicate white child, but its physiognomy was that of the negro. The lips were large, thick, and projecting, the nose flat, the hair though of a bright sandy hue, coarse and curled like wool, and the odour from the skin particularly strong and pungent. The eyes had the pink colour, and trembling motion of the iris, peculiar to the albino.

Tonsillitis. The two cases noted in the table, occurred as is seen in the coldest season. They possessed all the characters of acute inflammation, and required the most active treatment. After the first depletion, emetics and blisters were eminently serviceable. There was in both much fœtor of the breath, but nothing typhoid or malignant either in the general or local affection.

Venenum. During the time of my residence at Nassau, there were two cases of poison that fell under my observation, one from a species of poison fish, called the hog-fish, peculiar to the Bahamas, and the other from a vegetable nut which grows upon a beautifully ornamental bush, known by the name of the coral plant, an exotic from Demerara. The symptoms in that from eating the fish, which though known to be sometimes poisonous, is con-

sidered very delicious, occurred May 19th, in the family of a Mr. B., who had dined that day on this fish. Four hours after dinner, Mrs. B. was seized with violent vomiting and purging, very much the same as if attacked with cholera, which continued incessantly for twenty-four hours, when from her being advanced seven months in pregnancy, it brought on also symptoms of bearing down. There was also a sense of itching all over the skin, and pains which were described as running through the arms and legs—no fever.

The complaint was cured by a grain or two of opium and emollient injections. The rest of the family were slightly affected.* In some cases this animal poison causes the hair and nails to come out, *herein having some analogy in its action to the animal poison secreted from chancre*; as might have been very rationally inferred from what I have just remarked, of species of venereal whitlow.

The other case of poison was a boy about ten years of age, who on the 10th of December ate of the kernel of the coral nut growing in Mr. ——'s garden. In ten minutes after, he was seized with violent vomiting and retching, followed by large alvine dejections, which produced great exhaustion, cold extremities, pale shrunk countenance, slow and almost imperceptible pulse.

* A cat which, had partaken largely of the fish, did not suffer the least inconvenience, but a poor hen, which had merely picked at the bones, paid for this temerity with her life.

Cure.—Embrocation of mint steeped in brandy over the epigastrium, gtt. xx. of tr. theb. every half hour, having placed the patient in the mean while in a hot bath. After remaining in which some time, the vomiting ceased, heat was restored, and gentle sleep procured. Demulcent drinks through the night of milk and soup, and some brandy toddy occasionally if required.

Vermes. November 19th, 1824, a light-coloured robust mulatto, about thirty-two years of age, was troubled with worms, which for the four days before had crept up into the œsophagus, and been voided from the mouth. They gave him no uneasiness whatever, and caused none of the usual symptoms which are attributed to worms in children, viz. picking of the nose, epistaxis, &c. Relieved by ʒss. of elixir proprietatis daily.

VARIOLOID. A black man, named *Montar*, with this affection, arrived at Nassau September 30, 1824, from Havana, where it was said to be prevailing at the time. It consisted of a slight eruption only of vesicular pimples upon the face, filled with a semi-transparent whitish fluid, and very few vesicles on the other parts of the body. There had been no fever in four days, and the man being apparently in health, but for this trifling eruption, was permitted to come on shore before the health officer saw him, which afterwards as it turned out, occasioned considerable dissatisfaction in the town, the inhabitants of which are as sensibly alive to the contagion of yellow fever and small-pox, as those who live under a more rigid quarantine in

northern countries. October 2d the eruption was thicker, and also appeared on the extremities and chest, but not at all confluent; redness and soreness of the eyes, but no soreness of throat. October 11th.—The eruption had dried away.

October 22d.—Another black man in the habit of associating with the above patient, who had been imprudently permitted to wander about town, took the disease, the eruption making its first appearance to-day. Great alarm now began to spread through the town, and great numbers were vaccinated. Both these cases soon recovered, and no other followed. A black servant boy, who was half an hour or more exposed to the disease within twenty feet of Montar, October 2d, and who had never been vaccinated, or had the small-pox, had the kine-pock matter inserted into his arm October 6th, and on the 12th of the same month had a fine healthy vesicle.

A more extensive propagation of the disease might have been anticipated from the cool season having commenced. Had it been introduced in July and August, the heat as well as cleanliness, and well ventilated position of the town would have doubtless immediately extinguished it. Small-pox is too hardy a plant to be made to germinate and come to maturity in the summer season of the tropics.

